South Tuen Mun Government Secondary School
Business, Accounting and Financial Studies
Financial ratio #1a (1.1-1.4)

1.1) J lam plans to open a boutique in Tsim Sha Tsui. Suggest and explain TWO types of financial management decisions he has to make. (4 marks)

1.2) Explain why creditors prefer using the quick ratio rather than the current ratio to evaluate the liquidity of a business.

1.3) List TWO profitability ratios and explain what they measure

1.4) ‘A higher total assets turnover indicates lower efficiency in asset utilization.’
Explain if this statement is correct.

1.1 J Lam has to make the following types of financial management decisions:

- Investment decisions: He has to seek investment opportunities and engage in profitable long-term investments.
- Financing decisions: He has to choose suitable financing methods to raise funds.
- Dividend decisions: If he invites friends or relatives to invest in the boutique, he has to decide on the appropriate amount and form of dividends to be paid to stockholders.
- Working capital decisions: He has to manage short-term assets and liabilities such as cash, accounts receivable, accounts payable and inventory well so that his boutique can operate smoothly. For example, he has to decide on appropriate levels of cash and inventory.

1.2 Both the current ratio and quick ratio can evaluate the short-term debt repayment ability of a business. However, inventory is excluded in the calculation of the quick ratio.

Since it takes time for a business to convert inventory into cash, the quick ratio can reflect the liquidity of a business more accurately.
This explains why creditors prefer using the quick ratio rather than the current ratio to evaluate the liquidity of a business.

1.3 Profitability ratios include:

- Gross profit ratio: This measures the profitability of a firm after deducting the cost of goods sold, but not expenses.
- Net profit ratio: This measures the profitability of a firm after deducting all costs and expenses.
- Return on capital employed: This measures the ability of a firm to generate profits on its capital.

1.4 The statement is wrong. (1 marks)
Total assets turnover is calculated as follows:

$$\text{Total assets turnover} = \frac{\text{Sales}}{\text{Total assets}}$$ (1 marks)

According to the formula, a higher total assets turnover means that a firm can use fewer assets to generate a given level of sales revenue. In other words, a higher total assets turnover indicates higher efficiency in asset utilisation. (2 marks)

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Financial ratio #1b (A1.1-A1.6)

A1-1) Explain why the gross profit ratio is usually positive but the net profit ratio can be negative.

A1-2) Explain why the net profit ratio is usually lower than the gross profit ratio.

A1-3) Explain why the net profit before interest and tax (EBIT) is usually used in the calculation of return on capital employed for limited companies?

A1-4) If the inventory turnover of a firm is low, what is the implication for the liquidity of the firm?

A1-5) If the trade receivables turnover of a firm is low, what is the implication for the liquidity of the firm?

A1-6) if the trade payables turnover of a firm is low, what is the implication for the liquidity of the firm?

A1-1 Gross profit is equal to sales minus the cost of goods sold. When gross profit is negative, sales are less than cost of goods sold, meaning that the overall selling price of goods is lower than the per unit cost. This seldom happens in the real world. Hence, the gross profit ratio is usually positive.
Net profit is calculated as (gross profit + other revenues – expenses). Other revenues are usually small. If the firm cannot make enough gross profit to pay for expenses, it is possible for the net profit and net profit ratio to be negative.

A1-2 Net profit is calculated as follows:
Net profit = Gross profit + Other revenues − Expenses
According to the formulae for gross profit ratio and net profit ratio, the net profit ratio is higher than the gross profit ratio only if net profit (or net profit before tax) is greater than gross profit.
According to the above equation, this happens only when other revenues are greater than expenses.
As other revenues do not come from the firm's core business, they are usually much smaller than expenses. As a result, the net profit ratio is usually lower than the gross profit ratio.

A1-3 The net profit before interest and tax (or EBIT) is calculated by deducting operating expenses (but not interest and tax) from gross profit. In other words, this is the operating profit.
As interest and tax are not excluded from the operating profit, this is regarded as a better measure of the return on long-term capital, especially for limited companies where loan capital is usually included in the capital employed.

A1-4 A low inventory turnover means that the firm converts inventory into cash slowly. This indicates that the firm's liquidity is low.

A1-5 A low trade receivables turnover means that the firm collects cash from its debtors slowly. This indicates that the firm's liquidity is low.

A1-6 A low trade payables turnover means that the firm settles its trade payable slowly. This may indicate that the firm has difficulty in paying its debt and has low liquidity.

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Financial ratio #1c (1.5-1.9)

1.5 Rooney's company has a net profit ratio of 10%. Sales amounted to $1,750,000 and total assets are $1,600,000. Calculate (to two decimal places) the following:

a) Net Profit before tax

b) Total assets turnover

1.6) K Wong's business has working capital of $8,000 and a current ratio of 2:1.
What is the amount of current assets?

1.7) Must the gross profit ratio increase when more units of goods are sold? Explain.

1.8) Danny's trading company had a trade receivables turnover of five times last year. Its gross profit, average trade receivables and average inventory amounted to $2,100,000, $1,200,000 and $800,000, respectively. Calculate the following:

a) Sales (assume all sales are made on credit)

b) Inventory turnover

1.9) Linda Wong is the sole owner of a logistics company, she has prepared the financial statements for the last financial year and calculated the following financial ratios.

Current ratio 1.05 : 1 Quick ratio 1.44 : 1

Linda presents the financial ratios to her friend, Tommy Lee. Tommy finds that she has made a mistake in calculating the ratio. Explain what the mistake is.

Answers

1.5 **a** Net profit ratio = Net profit before tax ÷ Sales × 100% (1 mark)

10% = Net profit before tax ÷ $1,750,000 × 100%

Net profit before tax = $175,000 (1 mark)

b Total assets turnover = $1,750,000 ÷ $1,600,000 (1 mark)

= 1.09 times (1 mark)

1.6 Given that:

(1): Working capital = Current assets – Current liabilities = $8,000 (1 mark)

(2): Current ratio = Current assets ÷ Current liabilities : 1 = 2 : 1 (1 mark)

From equation (2), we have:

(3): Current assets ÷ 2 = Current liabilities

By substituting equation (3) into equation (1), we have:

Current assets – (Current assets ÷ 2) = $8,000 (1 mark)

Current assets = $16,000 (1 mark)

1.7 No. (1 mark)

The gross profit ratio is calculated as follows:

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Sales}} \times 100\%$$

$$= \frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}} \times 100\%$$

$$= \left(1 - \frac{\text{Costs of goods sold}}{\text{Sales}}\right) \times 100\%$$ (1 mark)

When more units of goods are sold, both sales and the cost of goods sold increase. Therefore, the change in the grossprofit ratio depends on how much sales and the cost of goods sold have increased. (1 mark)

If sales increase by a smaller percentage than the cost of goods sold, the gross profit ratio will decrease. (1 mark)

If sales increase by a greater percentage than the cost of goods sold, the gross profit ratio will increase. (1 mark)

If sales increase by the same percentage as the cost of goods sold, the gross profit ratio will remain unchanged. (1 mark)

1.8 **a** Trade receivables turnover = Credit sales ÷ Average trade receivables (1 mark)

5 = Credit sales ÷ $1,200,000

Credit sales = $6,000,000

As sales were equal to credit sales, sales at Danny’s company were $6,000,000. (1 mark)

b Gross profit = Sales – Cost of goods sold (1 mark)

$2,100,000 = $6,000,000 – Cost of goods sold

Cost of goods sold = $3,900,000 (1 mark)

Inventory turnover = Cost of goods sold ÷ Average inventory (1 mark)

= $3,900,000 ÷ $800,000

= 4.875 times (1 mark)

1.9 It is impossible for the quick ratio at Linda’s company to be greater than the current ratio. (2 marks)

This is because inventory is deducted from current assets when calculating the quick ratio. Therefore, the quick ratiomust be smaller than or equal to the current ratio. (2 marks)

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Financial ratio #1d (1.10-1.11)

1.10) ABC company is a limited company. It has not issued any preference shares.
The following is an extract from its financial statement last year.

Operating profit	$650,000	Retained profits	$919,000
Share Capital	$500,000	Current liabilities	$400,000
Share premium	$580,000	Total liabilities	$1,150,000

Calculate (to two decimal places) the following accounting ratios for ABC Company:
a) Gearing ratio

b) Return on capital employed

1.11) Tim Won Limited is a meat importer in HK. It sells meat to both restaurants and individual consumers. a) In terms of marketing, identify the TWO types of markets that Tim Won Limited serves. Explain the differences between the two markets

	Restaurants	Individual consumers
Number of buyers		
Size of purchase		
Location of buyers		
Nature of demand		
Price sensitivity of buyers		
Number of participants and complexity of the purchase decision		

b) One day, a restaurant requests that it purchase from Tim Won Limited on credit. Suggest THREE types of accounting ratios that Tim Won may consider in deciding whether credit should be granted to the customer. Explain why Tim Won should consider them.

1.10 **a** Non-current liabilities = $1,150,000 − $400,000 = $750,000

Shareholders' fund = $500,000 + $580,000 + $919,000 = $1,999,000

Gearing ratio = (Non-current liabilities + Preference share capital)

÷ (Non-current liabilities + Shareholders' fund) × 100%

= ($750,000 + 0) ÷ ($750,000 + $1,999,000) × 100% (2 marks)

= 27.28% (1 mark)

B Return on capital employed

= Net profit before interest and tax ÷ (Non-current liabilities + Shareholders' fund) × 100%

= $650,000 ÷ ($750,000 + $1,999,000) × 100% (2 marks)

= 23.64% (1 mark)

1.11 **b)** Types of accounting ratios that Tim Won may consider include:

- Profitability ratios: These ratios measure the earning power of a firm. If the restaurant has a higher earning power(profitability), it is more likely to have sufficient capital to settle its trade payables. (3 marks)
- Liquidity ratios: These ratios measure a firm's ability to repay its short-term liabilities likely to be able to settle its trade payables on time. (3 marks)
- Solvency ratios: These ratios measure the overall debt repayment ability of a firm. If the restaurant has a higher overall debt repayment ability, it is more likely to be able to settle its trade payables on time. (3 marks)

1.11 **a** The two types of markets that Tim Won Limited serves are the business market (in which restaurants buy meat) and the consumer market (in which individual consumers buy meat). (2 marks)

The differences between these two markets are as follows:

	Restaurants	Individual consumers
Number of buyers	There are only a limited number of restaurants in Hong Kong.	All people in Hong Kong are potential consumers
Size of purchase	Involves a far larger amount of money per transaction.	Amount of money involved per transaction is small.
Location of buyers	Most restaurants are located in more densely populated areas.	Some individual consumers may live in suburban areas or on outlying islands.
Nature of demand	The restaurants' demand for meat is derived from consumers' demand for their meat dishes.	Individual consumers' demand for meat is related to their personal needs.
Price sensitivity of buyers	Less price-sensitive as the restaurants' demand for meat is derived in nature	There are many meat retailers in the consumer market. The choices available make individual consumers of meat more sensitive to price changes.
Number of participants and complexity of the purchase decision	Involves more thorough discussion among various executives and staff within the restaurants. This implies that such a purchase decision is highly complex.	An individual consumer who buys meat often makes the decision himself and such buying activity does not involve much money. Hence, the purchase decision is far less complex.

(Any three of the above, 1 mark for stating the difference and 2 marks for the comparison)